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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,889	06/03/2004	Manabu Hashikura	39.043	3888

29453 7590 02/23/2006

JUDGE PATENT FIRM
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NISHINOMIYA-SHI, HYOGO, 662-0035
JAPAN

EXAMINER

NGUYEN, DAO H

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

5

Office Action Summary	Application No.	Applicant(s)	
	10/709,889	HASHIKURA ET AL.	
	Examiner	Art Unit	
	Dao H. Nguyen	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 11-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In response to the communications dated 11/23/2005, claims 1-17 are active in this application.

Claims 11-17 are newly added claims.

Election/Restrictions

2. Newly submitted claims 11-17 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: New claims 11-17 recite a holder which is structurally and materially different from that of the original claims 1-10. For example, new claims 11-17 comprising a ceramic-metal composite including a substantially uniform mixture of ceramic and metal microconstituents; and in addition, the composite ceramic-metal composite comprises metal infiltrated into a porous ceramic substrate.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 11-17 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Remarks

3. Applicant's argument(s), filed 11/23/2005 have been fully considered, but they are not persuasive.

Particularly, Examiner do/does not agree with Applicant's argument(s) that Kuibira does not disclose a composite of a ceramic and a metal furnished atop the ceramic susceptor. Figs. 3-10 of Kuibira clearly show all claimed limitations. For example, fig. 3 does show a ceramic susceptor 10b on which a composite of a ceramic 14 & 10a and a metal 11 is furnished. Such composite of ceramic and metal are better shown in figs. 6, 9, and 10, which include a solid material composed of two substance having different physical characteristics, the first substance is ceramic 14 & 10a (fig. 3) (or 10e, fig. 9; or 10f, fig. 10), and the second substance is metal 11 (or 15, 16, figs. 9, 10), and in which each substance retains its identity while contributing desirable properties to the whole (See Merriam-Webster's Collegiate Dictionary, tenth edition, page 236 for definition of composite). Furthermore, figs. 4-5 show holders 1 comprise of susceptor 10b, and composite of ceramic (layers 14a, 10a, 14b, 10c, 14c, and 10d) and metal (11, 12, 13) furnished atop the ceramic susceptor 10b.

For the above reasons, it is believed that the rejections should be sustained and is rewritten as follows.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim(s) 1-10 are rejected under 35 U. S. C. § 102 (b) as being anticipated by U.S. Patent No. 6,508,884 to Kuibira et al.

Regarding claim 1, Kuibira discloses a holder 1 for use in semiconductor or liquid-crystal manufacturing devices, as shown in figs. 1-10, comprising:

a ceramic susceptor 10b; and

a composite of a ceramic 14&10a and a metal 11 furnished atop said ceramic susceptor 10b. See also col. 9, line 1 to col. 11, line 14.

Regarding claim 2, Kuibira discloses the holder wherein the Young's modulus of the ceramic-and-metal composite is 300 GPa or less. This is inherent properties of ceramic.

Regarding claim 3, Kuibira discloses the holder wherein the thermal conductivity of the ceramic-and-metal composite is 100 W/mK or more. See col. 5, lines 13-27.

Regarding claim 4, Kuibira discloses the holder wherein the thermal expansion coefficient of the ceramic-and-metal composite is 2.5×10^{-6} to 8.0×10^{-6} /°C. See col. 5, line 54 to col. 6, line 3.

Regarding claim 5, Kuibira discloses the holder further comprising a support part 2 supporting the ceramic-and-metal composite. See figs. 1-2.

Regarding claim 6, Kuibira discloses the holder further comprising a support part 2 supporting the ceramic susceptor. See figs. 1-2.

Regarding claim 7, Kuibira discloses the holder further comprising a support part 2 supporting both the ceramic-and-metal composite and the ceramic susceptor. See figs. 1-2.

Regarding claim 8, Kuibira discloses the holder wherein a coating 14b (fig. 7) is formed on at least a processed-object-retaining side of the holder 1. Note that as shown in fig. 7, holder 1 comprising a ceramic susceptor 14a, a composite of ceramic 10a and metal 12 furnished atop the ceramic susceptor 14a, with a coating 14b on top of metal layer 12.

Regarding claim 9, Kuibira discloses the holder wherein the ceramic-and-metal composite functions as an electrode. See col. 9, lines 1-53.

Regarding claim 10, Kuibira discloses the semiconductor or liquid-crystal manufacturing device in which the holder is installed. See figs. 1-2.

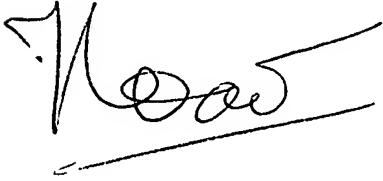
Conclusion

6. **THIS ACTION IS MADE FINAL.** A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dao Nguyen whose telephone number is (571)272-1791. The examiner can normally be reached on Monday-Friday 9:00am - 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached on (571)272-1787. The fax numbers for all communication(s) is (571)273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1625.

A handwritten signature in black ink, appearing to read 'Dao H. Nguyen', with a long horizontal stroke extending from the bottom right.

Dao H. Nguyen
Art Unit 2818
February 10, 2006

A handwritten signature in black ink, appearing to read 'David Nelms', with a large loop at the top.

David Nelms
Supervisory Patent Examiner
Technology Center 2800